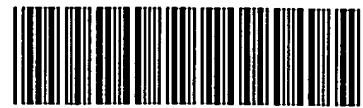


RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/677,956A
Source: JFW/6
Date Processed by STIC: 07/07/2006

ENTERED



IFW16

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/10/677,956A

DATE: 07/07/2006
 TIME: 17:08:11

Input Set : A:\323-100USD.ST25.txt
 Output Set: N:\CRF4\07072006\J677956A.raw

5 <110> APPLICANT: Zebedee, Suzanne
 6 Inchauspe, Genevieve
 7 Nasoff, Marc S.
 8 Prince, Alfred M.
 10 <120> TITLE OF INVENTION: METHODS AND SYSTEMS FOR PRODUCING RECOMBINANT VIRAL ANTIGENS
 12 <130> FILE REFERENCE: 323-100USD
 14 <140> CURRENT APPLICATION NUMBER: 10/677,956A
 15 <141> CURRENT FILING DATE: 2003-10-01
 17 <150> PRIOR APPLICATION NUMBER: 08/931,855
 18 <151> PRIOR FILING DATE: 1997-09-16
 20 <150> PRIOR APPLICATION NUMBER: 08/563,733
 21 <151> PRIOR FILING DATE: 1995-11-08
 23 <150> PRIOR APPLICATION NUMBER: 08/272,271
 24 <151> PRIOR FILING DATE: 1994-07-08
 26 <150> PRIOR APPLICATION NUMBER: 07/616,369
 27 <151> PRIOR FILING DATE: 1990-11-21
 29 <150> PRIOR APPLICATION NUMBER: 07/573,643
 30 <151> PRIOR FILING DATE: 1990-08-27
 32 <160> NUMBER OF SEQ ID NOS: 71
 34 <170> SOFTWARE: PatentIn version 3.3
 36 <210> SEQ ID NO: 1
 37 <211> LENGTH: 795
 38 <212> TYPE: DNA
 39 <213> ORGANISM: Human immunodeficiency virus
 42 <220> FEATURE:
 43 <221> NAME/KEY: CDS
 44 <222> LOCATION: (16)..(789)
 46 <400> SEQUENCE: 1
 47 aggagggttt ttcat atg cca atc gtg cag aac atc cag ggg caa atg gta 51
 48 Met Pro Ile Val Gln Asn Ile Gln Gly Gln Met Val
 49 1 5 10
 51 cat cag gcc ata tca cct aga act tta aat gca tgg gta aaa gta gta 99
 52 His Gln Ala Ile Ser Pro Arg Thr Leu Asn Ala Trp Val Lys Val Val
 53 15 20 25
 55 gaa gag aag gct ttc agc cca gaa gtg ata ccc atg ttt tca gca tta 147
 56 Glu Glu Lys Ala Phe Ser Pro Glu Val Ile Pro Met Phe Ser Ala Leu
 57 30 35 40
 59 tca gaa gga gcc acc cca caa gat tta aac acc atg cta aac aca gtg 195
 60 Ser Glu Gly Ala Thr Pro Gln Asp Leu Asn Thr Met Leu Asn Thr Val
 61 45 50 55 60
 63 ggg gga cat caa gca gcc atg caa atg tta aaa gag acc atc aat gag 243
 64 Gly Gly His Gln Ala Ala Met Gln Met Leu Lys Glu Thr Ile Asn Glu
 65 65 70 75

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/677,956A

DATE: 07/07/2006
TIME: 17:08:11

Input Set : A:\323-100USD.ST25.txt
Output Set: N:\CRF4\07072006\J677956A.raw

67 gaa gct gca gaa tgg gat aga gtg cat cca gtg cat gca ggg cct att	291
68 Glu Ala Ala Glu Trp Asp Arg Val His Pro Val His Ala Gly Pro Ile	
69 80 85 90	
71 gca cca ggc cag atg aga gaa cca agg gga agt gac ata gca gga act	339
72 Ala Pro Gly Gln Met Arg Glu Pro Arg Gly Ser Asp Ile Ala Gly Thr	
73 95 100 105	
75 act agt acc ctt cag gaa caa ata gga tgg atg aca aat aat cca cct	387
76 Thr Ser Thr Leu Gln Glu Gln Ile Gly Trp Met Thr Asn Asn Pro Pro	
77 110 115 120	
79 atc cca gta gga gaa att tat aaa aga tgg ata atc ctg gga tta aat	435
80 Ile Pro Val Gly Glu Ile Tyr Lys Arg Trp Ile Ile Leu Gly Leu Asn	
81 125 130 135 140	
83 aaa ata gta aga atg tat agc cct acc agc att ctg gac ata aga caa	483
84 Lys Ile Val Arg Met Tyr Ser Pro Thr Ser Ile Leu Asp Ile Arg Gln	
85 145 150 155	
87 gga cca aag gaa ccc ttt aga gac tat gta gac cgg ttc tat aaa act	531
88 Gly Pro Lys Glu Pro Phe Arg Asp Tyr Val Asp Arg Phe Tyr Lys Thr	
89 160 165 170	
91 cta aga gcc gag caa gct tca cag gag gta aaa aat tgg atg aca gaa	579
92 Leu Arg Ala Glu Gln Ala Ser Gln Glu Val Lys Asn Trp Met Thr Glu	
93 175 180 185	
95 acc ttg ttg gtc caa aat gcg aac cca gat tgt aag act att tta aaa	627
96 Thr Leu Leu Val Gln Asn Ala Asn Pro Asp Cys Lys Thr Ile Leu Lys	
97 190 195 200	
99 gca ttg gga cca gcg gct aca cta gaa gaa atg atg aca gca tgt cag	675
100 Ala Leu Gly Pro Ala Ala Thr Leu Glu Glu Met Met Thr Ala Cys Gln	
101 205 210 215 220	
103 gga gta gga gga ccc aaa aat caa caa tta tta tcc tta tgg ggg tgt	723
104 Gly Val Gly Gly Pro Lys Asn Gln Gln Leu Leu Ser Leu Trp Gly Cys	
105 225 230 235	
107 aaa ggg aaa ctt gtt tgt tat act tcc gtt aaa tgg aat gga ccc ggc	771
108 Lys Gly Lys Leu Val Cys Tyr Thr Ser Val Lys Trp Asn Gly Pro Gly	
109 240 245 250	
111 cat aag gca aga gtt ttg taataa	795
112 His Lys Ala Arg Val Leu	
113 255	
116 <210> SEQ ID NO: 2	
117 <211> LENGTH: 258	
118 <212> TYPE: PRT	
119 <213> ORGANISM: Human immunodeficiency virus	
121 <400> SEQUENCE: 2	
123 Met Pro Ile Val Gln Asn Ile Gln Gly Gln Met Val His Gln Ala Ile	
124 1 5 10 15	
127 Ser Pro Arg Thr Leu Asn Ala Trp Val Lys Val Val Glu Glu Lys Ala	
128 20 25 30	
131 Phe Ser Pro Glu Val Ile Pro Met Phe Ser Ala Leu Ser Glu Gly Ala	
132 35 40 45	
135 Thr Pro Gln Asp Leu Asn Thr Met Leu Asn Thr Val Gly Gly His Gln	
136 50 55 60	

RAW SEQUENCE LISTING DATE: 07/07/2006
 PATENT APPLICATION: US/10/677,956A TIME: 17:08:11

Input Set : A:\323-100USD.ST25.txt
 Output Set: N:\CRF4\07072006\J677956A.raw

139 Ala Ala Met Gln Met Leu Lys Glu Thr Ile Asn Glu Glu Ala Ala Glu
 140 65 70 75 80
 143 Trp Asp Arg Val His Pro Val His Ala Gly Pro Ile Ala Pro Gly Gln
 144 85 90 95
 147 Met Arg Glu Pro Arg Gly Ser Asp Ile Ala Gly Thr Thr Ser Thr Leu
 148 100 105 110
 151 Gln Glu Gln Ile Gly Trp Met Thr Asn Asn Pro Pro Ile Pro Val Gly
 152 115 120 125
 155 Glu Ile Tyr Lys Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg
 156 130 135 140
 159 Met Tyr Ser Pro Thr Ser Ile Leu Asp Ile Arg Gln Gly Pro Lys Glu
 160 145 150 155 160
 163 Pro Phe Arg Asp Tyr Val Asp Arg Phe Tyr Lys Thr Leu Arg Ala Glu
 164 165 170 175
 167 Gln Ala Ser Gln Glu Val Lys Asn Trp Met Thr Glu Thr Leu Leu Val
 168 180 185 190
 171 Gln Asn Ala Asn Pro Asp Cys Lys Thr Ile Leu Lys Ala Leu Gly Pro
 172 195 200 205
 175 Ala Ala Thr Leu Glu Glu Met Met Thr Ala Cys Gln Gly Val Gly Gly
 176 210 215 220
 179 Pro Lys Asn Gln Gln Leu Leu Ser Leu Trp Gly Cys Lys Gly Lys Leu
 180 225 230 235 240
 183 Val Cys Tyr Thr Ser Val Lys Trp Asn Gly Pro Gly His Lys Ala Arg
 184 245 250 255
 187 Val Leu
 191 <210> SEQ ID NO: 3
 192 <211> LENGTH: 795
 193 <212> TYPE: DNA
 194 <213> ORGANISM: Human immunodeficiency virus
 197 <220> FEATURE:
 198 <221> NAME/KEY: CDS
 199 <222> LOCATION: (16)..(789)
 201 <400> SEQUENCE: 3
 202 aggagggttt ttcat atg cca atc gtg cag aac atc cag ggg caa atg gta 51
 203 Met Pro Ile Val Gln Asn Ile Gln Gly Gln Met Val
 204 1 5 10
 206 cat cag gcc ata tca cct aga act tta aat gca tgg gta aaa gta gta 99
 207 His Gln Ala Ile Ser Pro Arg Thr Leu Asn Ala Trp Val Lys Val Val
 208 15 20 25
 210 gaa gag aag gct ttc agc cca gaa gtg ata ccc atg ttt tca gca tta 147
 211 Glu Glu Lys Ala Phe Ser Pro Glu Val Ile Pro Met Phe Ser Ala Leu
 212 30 35 40
 214 tca gaa gga gcc acc cca caa gat tta aac acc atg cta aac aca gtg 195
 215 Ser Glu Gly Ala Thr Pro Gln Asp Leu Asn Thr Met Leu Asn Thr Val
 216 45 50 55 60
 218 ggg gga cat caa gca gcc atg caa atg tta aaa gag acc atc aat gag 243
 219 Gly Gly His Gln Ala Ala Met Gln Met Leu Lys Glu Thr Ile Asn Glu
 220 65 70 75
 222 gaa gct gca gaa tgg gat aga gtg cat cca gtg cat gca ggg cct att 291

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/677,956A

DATE: 07/07/2006
TIME: 17:08:11

Input Set : A:\323-100USD.ST25.txt
Output Set: N:\CRF4\07072006\J677956A.raw

223	Glu	Ala	Ala	Glu	Trp	Asp	Arg	Val	His	Pro	Val	His	Ala	Gly	Pro	Ile	
224				80				85				90					
226	gca	cca	ggc	cag	atg	aga	gaa	cca	agg	gga	agt	gac	ata	gca	gga	act	339
227	Ala	Pro	Gly	Gln	Met	Arg	Glu	Pro	Arg	Gly	Ser	Asp	Ile	Ala	Gly	Thr	
228				95				100				105					
230	act	agt	acc	ctt	cag	gaa	caa	ata	gga	tgg	atg	aca	aat	aat	cca	cct	387
231	Thr	Ser	Thr	Leu	Gln	Glu	Gln	Ile	Gly	Trp	Met	Thr	Asn	Asn	Pro	Pro	
232				110				115				120					
234	atc	cca	gta	gga	gaa	att	tat	aaa	aga	tgg	ata	atc	ctg	gga	tta	aat	435
235	Ile	Pro	Val	Gly	Glu	Ile	Tyr	Lys	Arg	Trp	Ile	Ile	Leu	Gly	Leu	Asn	
236	125				130				135				140				
238	aaa	ata	gta	aga	atg	tat	agc	cct	acc	agc	att	ctg	gac	ata	aga	caa	483
239	Lys	Ile	Val	Arg	Met	Tyr	Ser	Pro	Thr	Ser	Ile	Leu	Asp	Ile	Arg	Gln	
240					145				150				155				
242	gga	cca	aag	gaa	ccc	ttt	aga	gac	tat	gta	gac	cgg	ttc	tat	aaa	act	531
243	Gly	Pro	Lys	Glu	Pro	Phe	Arg	Asp	Tyr	Val	Asp	Arg	Phe	Tyr	Lys	Thr	
244					160				165				170				
246	cta	aga	gcc	gag	caa	gct	tca	cag	gag	gta	aaa	aat	tgg	atg	aca	gaa	579
247	Leu	Arg	Ala	Glu	Gln	Ala	Ser	Gln	Glu	Val	Lys	Asn	Trp	Met	Thr	Glu	
248					175				180				185				
250	acc	ttg	ttg	gtc	caa	aat	gcg	aac	cca	gat	tgt	aag	act	att	tta	aaa	627
251	Thr	Leu	Leu	Val	Gln	Asn	Ala	Asn	Pro	Asp	Cys	Lys	Thr	Ile	Leu	Lys	
252					190				195				200				
254	gca	ttg	gga	cca	gcg	gct	aca	cta	gaa	atg	atg	aca	gca	tgt	cag	675	
255	Ala	Leu	Gly	Pro	Ala	Ala	Thr	Leu	Glu	Met	Met	Thr	Ala	Cys	Gln		
256	205				210				215				220				
258	gga	gta	gga	gga	ccc	aaa	aat	caa	caa	aga	tta	aat	tta	tgg	ggg	tgt	723
259	Gly	Val	Gly	Gly	Pro	Lys	Asn	Gln	Gln	Arg	Leu	Asn	Leu	Trp	Gly	Cys	
260					225				230				235				
262	aaa	ggg	aaa	ctt	att	tgt	tat	act	tcc	gtt	aaa	tgg	aat	gga	ccc	ggc	771
263	Lys	Gly	Lys	Leu	Ile	Cys	Tyr	Thr	Ser	Val	Lys	Trp	Asn	Gly	Pro	Gly	
264					240				245				250				
266	cat	aag	gca	aga	gtt	ttg	taataa									795	
267	His	Lys	Ala	Arg	Val	Leu											
268				255													
271	<210>	SEQ	ID	NO:	4												
272	<211>	LENGTH:	258														
273	<212>	TYPE:	PRT														
274	<213>	ORGANISM:	Human immunodeficiency virus														
276	<400>	SEQUENCE:	4														
278	Met	Pro	Ile	Val	Gln	Asn	Ile	Gln	Gly	Gln	Met	Val	His	Gln	Ala	Ile	
279	1				5				10				15				
282	Ser	Pro	Arg	Thr	Leu	Asn	Ala	Trp	Val	Lys	Val	Val	Glu	Glu	Lys	Ala	
283					20				25				30.				
286	Phe	Ser	Pro	Glu	Val	Ile	Pro	Met	Phe	Ser	Ala	Leu	Ser	Glu	Gly	Ala	
287					35				40				45				
290	Thr	Pro	Gln	Asp	Leu	Asn	Thr	Met	Leu	Asn	Thr	Val	Gly	Gly	His	Gln	
291					50				55				60				
294	Ala	Ala	Met	Gln	Met	Leu	Lys	Glu	Thr	Ile	Asn	Glu	Glu	Ala	Ala	Glu	

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/677,956A

DATE: 07/07/2006
TIME: 17:08:11

Input Set : A:\323-100USD.ST25.txt
Output Set: N:\CRF4\07072006\J677956A.raw

295	65	70	75	80
298	Trp Asp Arg Val His Pro Val His Ala Gly Pro Ile Ala Pro Gly Gln			
299	85	90	95	
302	Met Arg Glu Pro Arg Gly Ser Asp Ile Ala Gly Thr Thr Ser Thr Leu			
303	100	105	110	
306	Gln Glu Gln Ile Gly Trp Met Thr Asn Asn Pro Pro Ile Pro Val Gly			
307	115	120	125	
310	Glu Ile Tyr Lys Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg			
311	130	135	140	
314	Met Tyr Ser Pro Thr Ser Ile Leu Asp Ile Arg Gln Gly Pro Lys Glu			
315	145	150	155	160
318	Pro Phe Arg Asp Tyr Val Asp Arg Phe Tyr Lys Thr Leu Arg Ala Glu			
319	165	170	175	
322	Gln Ala Ser Gln Glu Val Lys Asn Trp Met Thr Glu Thr Leu Leu Val			
323	180	185	190	
326	Gln Asn Ala Asn Pro Asp Cys Lys Thr Ile Leu Lys Ala Leu Gly Pro			
327	195	200	205	
330	Ala Ala Thr Leu Glu Glu Met Met Thr Ala Cys Gln Gly Val Gly Gly			
331	210	215	220	
334	Pro Lys Asn Gln Gln Arg Leu Asn Leu Trp Gly Cys Lys Gly Lys Leu			
335	225	230	235	240
338	Ile Cys Tyr Thr Ser Val Lys Trp Asn Gly Pro Gly His Lys Ala Arg			
339	245	250	255	
342	Val Leu			
346	<210> SEQ ID NO: 5			
347	<211> LENGTH: 795			
348	<212> TYPE: DNA			
349	<213> ORGANISM: Human immunodeficiency virus			
352	<220> FEATURE:			
353	<221> NAME/KEY: CDS			
354	<222> LOCATION: (16)..(789)			
356	<400> SEQUENCE: 5			
357	aggagggttt ttcat atg cca atc gtg cag aac atc cag ggg caa atg gta			51
358	Met Pro Ile Val Gln Asn Ile Gln Gly Gln Met Val			
359	1 5 10			
361	cat cag gcc ata tca cct aga act tta aat gca tgg gta aaa gta gta			99
362	His Gln Ala Ile Ser Pro Arg Thr Leu Asn Ala Trp Val Lys Val Val			
363	15 20 25			
365	gaa gag aag gct ttc agc cca gaa gtg ata ccc atg ttt tca gca tta			147
366	Glu Glu Lys Ala Phe Ser Pro Glu Val Ile Pro Met Phe Ser Ala Leu			
367	30 35 40			
369	tca gaa gga gcc acc cca caa gat tta aac acc atg cta aac aca gtg			195
370	Ser Glu Gly Ala Thr Pro Gln Asp Leu Asn Thr Met Leu Asn Thr Val			
371	45 50 55 60			
373	ggg gga cat caa gca gcc atg caa atg tta aaa gag acc atc aat gag			243
374	Gly Gly His Gln Ala Ala Met Gln Met Leu Lys Glu Thr Ile Asn Glu			
375	65 70 75			
377	gaa gct gca gaa tgg gat aga gtg cat cca gtg cat gca ggg cct att			291
378	Glu Ala Ala Glu Trp Asp Arg Val His Pro Val His Ala Gly Pro Ile			

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 07/07/2006
PATENT APPLICATION: US/10/677,956A TIME: 17:08:12

Input Set : A:\323-100USD.ST25.txt
Output Set: N:\CRF4\07072006\J677956A.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:19,20,21,22,23,24,25,26,27,28,29,31,32,33,34,35,36,37,38,39,40,41,42,43

Seq#:44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67

Seq#:68,69,70,71

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/677,956A

DATE: 07/07/2006

TIME: 17:08:12

Input Set : A:\323-100USD.ST25.txt

Output Set: N:\CRF4\07072006\J677956A.raw